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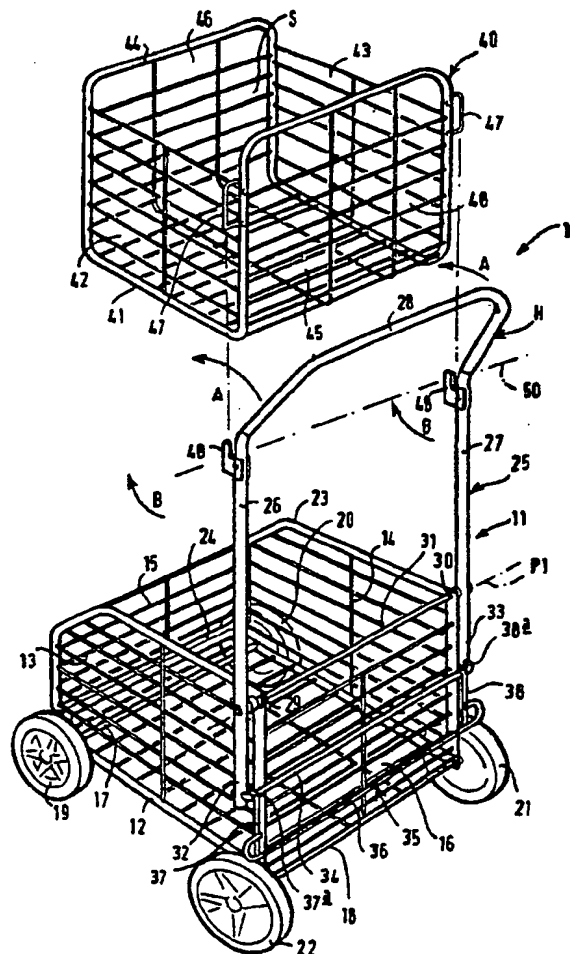
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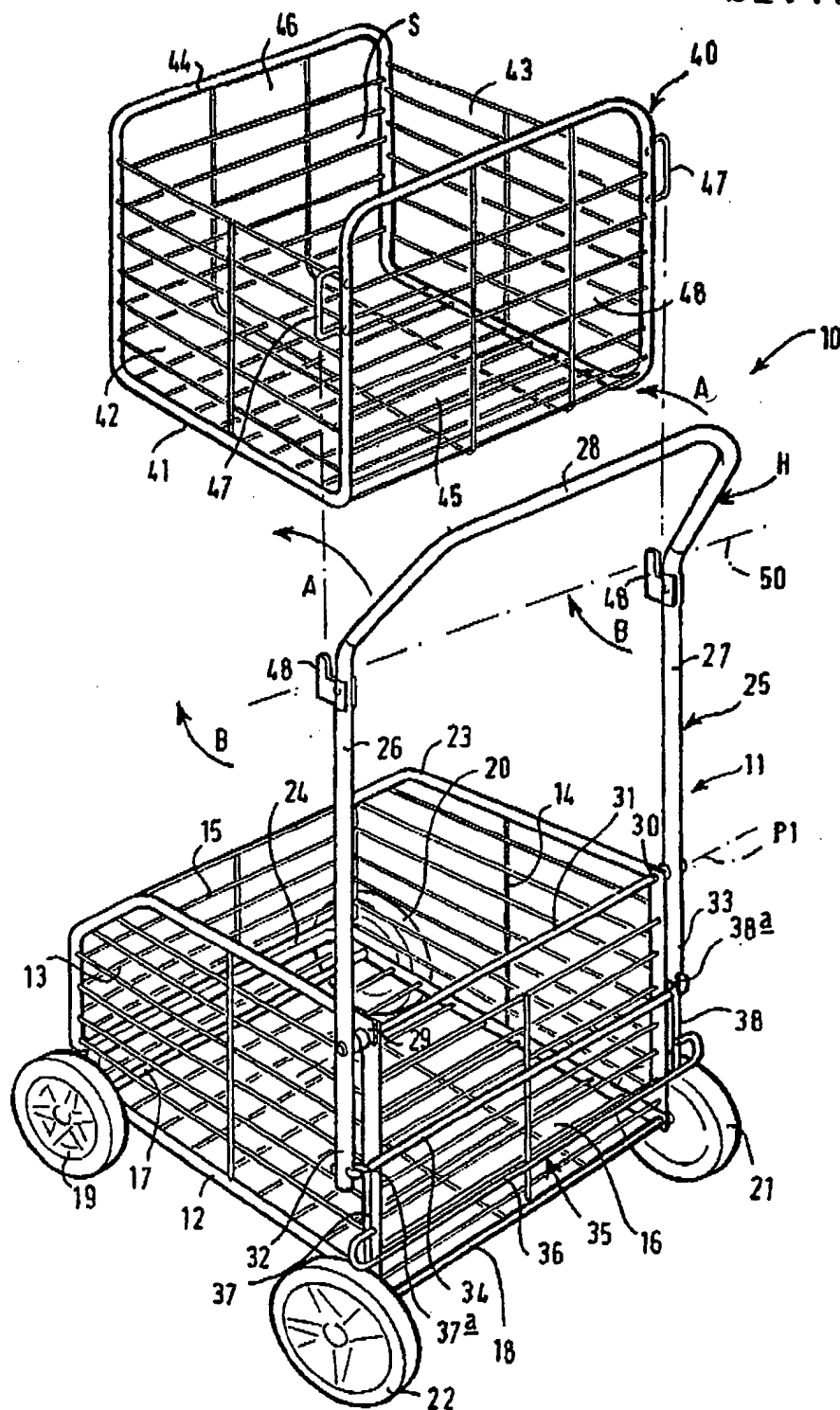
(54) Shopping trolleys

(57) A lower section (11) defines a space (24) into which articles may be placed has wheels (19,20,21,22), to enable the lower section (11) to be wheeled about, and an upper section (40), also defining a space into which articles to be transported may be placed, is detachably mounted above the lower section (11), for example on a handle means (25) extending generally upright from the lower section (11).



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SPECIFICATION

Improvements in or relating to shopping trolleys

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This invention relates to a shopping trolley.

A conventional shopping trolley, hereinafter being referred to as being "of the kind specified", comprises a wheeled structure which defines a space into which articles to be transported may be placed, and a handle means by which the trolley may be grasped and wheeled about.

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Difficulties are encountered with conventional shopping trolleys including:

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(a) limited space;

(b) limited capacity;

(c) the impossibility of loading such shopping trolleys into other than a very large car, so that it is necessary to remove all contents of the shopping trolley in order to transport these home.

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According to the invention, I provide a shopping trolley of the kind specified wherein the wheeled structure comprises a lower section, characterised in that an upper section also defining a space into which articles to be transported may be placed, is detachably mounted above the lower section.

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In a preferred arrangement, the upper and/or lower section comprises a generally box-shaped structure which defines the, respective, space.

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Thus articles may be placed in the lower section and in the upper section, and because the upper section is detachably mounted, the upper section may be separated from the lower section when it is desired for example, to load the shopping trolley into a car.

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Conveniently, the upper and/or lower section comprises side and floor frames, which define the box-like structure, the top of the or each of the structures being open to permit articles to be placed in the space defined by the or each structure.

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If desired, the upper section may be mounted directly on the space defining structure of the lower section or nested in the top of the lower section, and the lower and upper sections may be attached together by releasable securing means. Preferably though, the upper section is detachably mounted so that there is a clearance between the space defining structure of the lower section and the upper section, so that articles may be placed in the open top of the lower section even when the upper section is in position.

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To achieve this, the handle means may be provided on the lower section and extend generally upwardly from the space defining structure of the lower section. The upper section may be mounted on the handle means.

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For example, the handle means and the upper section may have cooperating formations which permit the upper section to be hooked

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onto the handle means and retained in position by gravity. The co-operating formations may permit the upper section to pivot relative to the handle means.

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In a preferred arrangement, the handle means may be foldable relative to the lower section, at least when the upper section is detached, and clamp means may be provided to retain the handle in its generally upright operative position, when in use.

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The clamp means may comprise a member pivotable on the lower section between a first, e.g. upper, position in which the handle means may be folded, and a second, e.g. lower, position in which the member engages a part of the handle means to retain the handle means in its operative position.

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Preferably, the upper section, when detached from the lower section, is nestable in the space of the lower section although a change in orientation of the upper section may be required to permit it to be received within the space of the lower section.

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There will now be given a detailed description to be read with reference to the accompanying drawing of a shopping trolley which is the preferred embodiment of this invention, having been selected for the purposes of illustrating the invention by way of example only.

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The accompanying drawing is a partly exploded perspective view from the rear, of a shopping trolley in accordance with the invention.

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A shopping trolley 10 comprises a lower section 11 which comprises a generally box-like structure having a floor 12 defined by a generally rectangular frame, two side walls 13, 14, a front wall 15 and rear wall 16, all comprising frameworks. The floor 12 supports two axles 17, 18, which carry four wheels 19, 20, 21, and 22.

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Thus the lower section 11 may be wheeled about from place to place. The top 23 of the structure is open and hence the structure defines a space 24 into which articles may be placed.

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It can be seen that the front wall 15 is not as high as the rear wall 16 and that the side walls 13 and 14 slope at the front to the height of the front wall 13.

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Mounted on the lower section 11 is a handle means 25 which comprises a generally inverted U-shaped frame having two upright parts 26 and 27, and a cross piece 28 which provides the actual handle. It can be seen that the cross piece 28 and adjacent portions of the upright parts 26, 27 are cranked out of the plane of the remainder of the uprights 26 and 27 and thus provides a handle portion H which projects slightly rearwardly relative to the space defining structure of the lower section 11.

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The upright parts 26 and 27 are each pivotally mounted at the top rear corners 29 and 30 of the lower section 11, the upright parts

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26, 27, being connected by a transverse member 31. The pivotal connection is spaced inwardly from the ends of the uprights 26 and 27, so that end portions 32, 33, of the upright parts 26 and 27 respectively, extend downwardly. At their ends, the upright parts 26 and 27 are connected by a further transverse member 34 which is shown, extends across the exterior of the rear wall 16 of the lower section 11.

Thus the handle means 25 may be folded in the direction of arrows A about a pivotal axis P1 i.e. the axis of transverse member 31.

To maintain the handle means 25 in the upright position shown, a clamping means 35 is provided which comprises a yet further transverse member 36 which is permanently fixed to side limbs 37, 38, which each have a hooked end 37a, 38a respectively which ends are pivoted to the lower section 11 just above the level of the transverse member 34 of the handle means by suitable pivot means.

Thus the clamping means 35 may be pivoted between the lower position (as shown) in which the hooked ends 37a, 38a of the side limbs 37, 38, engage the transverse member 34 of the handle means 25, to prevent the handle means from folding in the direction of arrows A, and an upper position in which the hooked ends 37a, 37b are clear of the transverse member 34 to permit the handle means 25 to be folded as described.

An upper section 40 is provided for mounting above the lower section 11, in this example, on the handle means 25. For clarity, in the drawings, the upper section 40 is shown above its mounted position, disengaged from the lower section 11. The upper section 40 also comprises a generally box-like structure having a floor 41, two side walls 42, 43, a front wall 44 and rear wall 45, all comprising frameworks, together defining a space S with an open top 46. The upper section 40 has first co-operating formations 47 comprising a pair of loops which each extend outwardly in the plane of rear wall 45, from the side walls 42 and 43.

The handle means 25 carries adjacent the cranked handle portion H, second co-operating formations 48 comprising hooks which extend forwardly of the handle means 25 in an opposite direction to the handle portion H.

Thus the upper section 40 may be hooked onto the handle means 25 by engaging the first and second co-operating formations 47, 48.

When in this position, the floor 41 of the upper section 40 will be above the open top 23 of the lower section 11 to provide a clearance therebetween, so that articles may be placed in the space 24 defined by the structure of the lower section 11, without having to remove the upper section 40. This is facilitated because the front wall 15 is of lower height than the rear wall 16 as described.

Thus the upper section 40 is retained in position above the lower section 11 mounted on the handle means 25 by gravity.

It can be seen that because of the configurations of the first and second co-operating formations 47, 48 the upper section 40 may be pivoted against gravity about a further axis 50 in the direction of arrows B whilst the first and second co-operating formations 47 and 48 are engaged. Again this further facilitates placing articles in the space 24 of the lower section 11 when the upper section 40 is in place.

The upper section 40 when detached from the lower section 11, can be nested within the space 24 of the lower section, although not when in the orientation shown. The upper section needs to be rotated to bring the open top 46 to the side. When nested, the open top 46 is positioned adjacent one or other of the side walls 14 and 16. Of course, if the upper and/or lower sections were of other dimensions, the upper section may be made nestable directly in the space 24 of the lower section 11 in the orientation shown, if required.

As shown the structure of the lower section 11 is a wire framework, and the upper section 40 also comprises a wire framework.

Of course, if desired, one or both of the floors 12 and 41 of the lower and upper sections respectively, could be solid, and/or if desired, one or more of the walls 13 to 16 and 42 to 45 of the structure could be solid and not comprise an open framework, or may be otherwise provided.

For example, the lower section 11 and/or upper section 40 may comprise a framework supporting flexible material such as netting, or a bag, to provide a space into which articles may be placed.

In an alternative arrangement, the upper section 40 is not mounted on the handle means 25 of the lower section, but is received directly on the space defining structure of the lower section 11 and is coupled thereto by releasable securing means such as clips.

In this event, the handle means 25 may be part of the upper section if desired.

In the example described, both the lower and upper sections 11 and 40 comprise generally box-like structures with open tops. If desired, one or other of these sections could be of another configuration, and the top of the lower and/or upper section 11, 40 may be closed if desired.

Although as described, the handle 25 is foldable to facilitate loading the shopping trolley into the boot of a car, and the upper section 40 is nestable in the space 24 of the space defining structure of the lower section 11 to facilitate stowage, if desired, the upper and/or lower section may be collapsible and/or the handle may be removable to facilitate loading and/or stowage of the trolley 10.

The features disclosed in the foregoing description, in the following claims, or the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a method or process for attaining the disclosed result, or a class or group of substances or compositions, as appropriate, may, separately or in any combination of such features, be utilised for realising the invention in diverse forms thereof.

CLAIMS

1. A shopping trolley of the kind specified wherein the wheeled structure comprises a lower section, characterised in that an upper section also defining a space into which articles to be transported may be placed, is detachably mounted above the lower section.
2. A trolley according to claim 1 wherein the upper and/or lower section comprises a generally box-shaped structure which defines the respective space.
3. A trolley according to claim 2 wherein the upper and/or lower section comprises side and floor frames which define the box-like structure, the top of the or each structure being open.
4. A trolley according to any one of the preceding claims wherein the upper section is mounted directly on the space defining structure of the lower section or is nested in the top of the lower section.
5. A trolley according to any one of claims 1 to 3 wherein the upper section is detachably mounted so that there is a clearance between the space defining structure of the lower section and the upper section.
6. A trolley according to claim 5 wherein the handle means is provided on the lower section and extends generally upwardly from the space defining structure of the lower section.
7. A trolley according to claim 6 wherein the upper section is mounted on the handle means.
8. A trolley according to claim 7 wherein the handle means and the upper section have co-operating formations which permit the upper section to be hooked onto the handle means.
9. A trolley according to claim 8 wherein the co-operating formations permit the upper section to pivot relative to the handle means.
10. A trolley according to any one of claims 6 to 9 wherein the handle means is foldable relative to the lower section, at least when the upper section is detached, and clamp means are provided to retain the handle means in its generally upright operative position, when in use.
11. A trolley according to claim 10 wherein the clamp means comprises a member pivotable on the lower section between a first position in which the handle may be folded and a second position in which the

member engages a part of the handle means to retain the handle means in its operative position.

12. A trolley according to any one of the preceding claims wherein the upper section, when detached from the lower section, is nestable in the space of the lower section.

13. A trolley substantially as hereinbefore described with reference to and as shown in the accompanying drawings.

14. Any novel feature or novel combination of features disclosed herein and/or shown in the accompanying drawings.

CLAIMS

Amendments to the claims have been filed, and have the following effect:—

Claims 1 to 12 above have been deleted or textually amended.

- New or textually amended claims have been filed as follows:—

1. A shopping trolley comprising a rigid lower section, including a frame on which ground-engaging wheels are mounted, the frame comprising part of a space defining structure into which articles to be transported may be placed, the lower section having a handle mounted thereon which is movable from a generally upright, operative position, to a folded position relative to the lower section, to facilitate storage, the trolley further comprising an upper section detachably mounted above the lower section, the upper section also defining a space into which articles to be transported may be placed.
2. A trolley according to claim 1 wherein the upper and lower sections each comprise a generally box-shaped structure which defines the respective space.
3. A trolley according to claim 2 wherein the upper and/or lower section comprises side and floor frames which define the box-like structure, the top of the or each structure being open.
4. A trolley according to any one of the preceding claims wherein the upper section is mounted directly on the space defining structure of the lower section.
5. A trolley according to any one of claims 1 to 3 wherein the upper section is detachably mounted on the handle when upright.
6. A trolley according to Claim 5 wherein there is a clearance between the lower and upper sections.
7. A trolley according to any one of the preceding claims wherein the handle and the upper section have co-operating formations which permit the upper section to be hooked onto the handle.
8. A trolley according to claim 7 wherein the co-operating formations permit the upper section to pivot relative to the handle means.
9. A trolley according to any one of Claims 1 to 8 wherein the handle is pivotable relative to the lower section, between its upright, op-

erative, and folded positions.

10. A trolley according to any one of the preceding claims wherein clamp means are provided to retain the handle means in its generally upright operative position, when in use.

11. A trolley according to claim 10 wherein the clamp means comprises a member pivotable on the lower section between a first position in which the handle may be folded and a second position in which the member engages a part of the handle to retain the handle in its operative position.

12. A trolley according to any one of the preceding claims wherein the upper section, when detached from the lower section, is nestable in the space defined by the space defining structure of the lower section.

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